STN Seach HistoryPrint selected from Online session

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(FILE 'HOME' ENTERED AT 18:49:58 ON 19 MAR 2012)

FILE 'MEDLINE, CAPLUS, SCISEARCH, BIOSIS' ENTERED AT 18:50:04 ON 19 MAR 2012

L1 913 S CHICKEN DT40
L2 3271 S ACTIVATION INDUCED CYTIDINE DEAMINASE
L3 11226 S HYPERMUTATION
L4 13037 S XRXX2 OR XRCC3 OR RAD51 OR RAD54
L5 1440 S L2 (L) L3
L6 352 S L5 AND PY<=2004
L7 118 DUP REM L6 (234 DUPLICATES REMOVED)
L8 0 S L7 AND L1
L9 118 FOCUS L7 1-
E BUERSTEDDE, JEAN-MARIE/AU
E BUERSTEDDE JEAN-MARIE/AU
L10 137 S E1
L11 176 S E2
L12 313 S L10 OR L11
L13 16 S L12 AND L5
L14 6 DUP REM L13 (10 DUPLICATES REMOVED)
L15 6 DUP REM L14 (0 DUPLICATES REMOVED)

=> d ti so au ab pi l15 4 2 1

L15 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2012 ACS on STN
TI Activation-induced cytidine deaminase initiates immunoglobulin gene conversion and hypermutation by a common intermediate
SO PLoS Biology (2004), 2(7), 967-974
CODEN: PBLIBG; ISSN: 1545-7885
URL: http://www.plosbiology.org/archive/1545-7885/2/7/pdf/10.1371_1545-7885_2_7_complete.pdf
AU Arakawa, Hiroshi; Saribasak, Huseyin; Buerstedde, Jean-Marie
AB Depending on the species and the lymphoid organ, activation-induced cytidine deaminase (AID) expression triggers diversification of the rearranged Ig (Ig) genes by pseudo V (ψV) gene-templated gene conversion or somatic hypermutation. To investigate how AID can alternatively induce recombination or hypermutation, ψV gene deletions were introduced into the rearranged light chain locus of the DT40 B-cell line. We show that the stepwise removal of the ψV donors not only reduces and eventually abolishes Ig gene conversion, but also activates AID-dependent Ig hypermutation. This strongly supports a model in which AID induces a common modification in the rearranged V(D)J segment, leading to a conversion tract in the presence of nearby donor sequences and to a point mutation in their absence.

L15 ANSWER 2 OF 6 MEDLINE ® on STN
TI A cis-acting diversification activator both necessary and sufficient for AID-mediated hypermutation.
SO PLoS genetics, (2009 Jan) Vol. 5, No. 1, pp. e1000332. Electronic Publication: 2009-01-09.
Journal code: 101239074. E-ISSN: 1553-7404. L-ISSN: 1553-7390.
Report No.: NLM-PMC2607555.
AU Blagodatski Artem; Batrak Vera; Schmidl Sabine; Schoetz Ulrike; Caldwell Randolph B; Arakawa Hiroshi; Buerstedde Jean-Marie

AB Hypermutation of the immunoglobulin (Ig) genes requires Activation Induced cytidine Deaminase (AID) and transcription, but it remains unclear why other transcribed genes of B cells do not mutate. We describe a reporter transgene crippled by hypermutation when inserted into or near the Ig light chain (IgL) locus of the DT40 B cell line yet stably expressed when inserted into other chromosomal positions. Step-wise deletions of the IgL locus revealed that a sequence extending for 9.8 kilobases downstream of the IgL transcription start site confers the hypermutation activity. This sequence, named DIVAC for diversification activator, efficiently activates hypermutation when inserted at non-Ig loci. The results significantly extend previously reported findings on AID-mediated gene diversification. They show by both deletion and insertion analyses that cis-acting sequences predispose neighboring transcription units to hypermutation.

L15 ANSWER 1 OF 6 MEDLINE ® on STN
TI Activation-induced cytidine deaminase-mediated hypermutation in the DT40 cell line.
SO Philosophical transactions of the Royal Society of London. Series B, Biological sciences, (2009 Mar 12) Vol. 364, No. 1517, pp. 639-44. Ref: 45
Journal code: 7503623. E-ISSN: 1471-2970. L-ISSN: 0962-8436.
Report No.: NLM-PMC2660921.
AU Arakawa Hiroshi; Buerstedde Jean-Marie
AB Depending on the species and the developmental stage of B cells, activation-induced cytidine deaminase (AID) triggers immunoglobulin (Ig) gene diversification by gene conversion, hypermutation or switch recombination. The bursal B cell line DT40 usually diversifies its rearranged Ig light chain (IgL) gene by gene conversion, but disruption of the RAD51 gene paralogues or deletion of the psiV conversion donors induces hypermutation. Although not all aspects of somatic hypermutation can be studied in DT40, the compact size of the chicken IgL locus and the ability to modify the genome by targeted integration are powerful experimental advantages. We review here how the studies in DT40 contributed to understanding how AID initiates Ig gene diversification and how AID-induced uracils are subsequently processed by uracil DNA glycosylase, proliferating cell nuclear antigens and error-prone polymerases. We also discuss the on-going research on the Ig locus specificity of hypermutation and the possibility of using hypermutation for the artificial evolution of proteins and regulatory sequences in DT40.